

AMENDMENTS TO THE CLAIMS

Please amend the claims as set out below.

1. (Canceled)
2. (Previously Presented) An isolated antibody or a functional fragment thereof that is reactive with the second extracellular loop of C5aR set forth as the amino acid sequence from residue 175 to 206 of SEQ ID NO: 1, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR.
3. (Previously Presented) An isolated antibody or a functional fragment thereof that is reactive with the same epitope of C5aR as a monoclonal antibody as deposited with ECACC under accession number 00110609, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR.
4. (Previously Presented) An isolated antibody or a functional fragment thereof that is reactive with the same epitope of C5aR as a monoclonal antibody as deposited with ECACC under accession number 02090226, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR.
5. (Previously Presented) An isolated antibody or a functional fragment thereof that is reactive with the same epitope of C5aR as a monoclonal antibody as deposited with ECACC under accession number 04090801, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR.
6. (Previously Presented) An isolated antibody or a functional fragment thereof that binds to C5aR, wherein the antibody or functional fragment thereof competitively inhibits the

binding of a monoclonal antibody as deposited with ECACC under accession number 00110609 to C5aR.

7. (Previously Presented) An isolated antibody or a functional fragment thereof that binds to C5aR, wherein the antibody or functional fragment thereof competitively inhibits the binding of a monoclonal antibody as deposited with ECACC under accession number 02090226 to C5aR.

8. (Previously Presented) An isolated antibody or a functional fragment thereof that binds to C5aR, wherein the antibody or functional fragment thereof competitively inhibits the binding of a monoclonal antibody as deposited with ECACC under accession number 04090801 to C5aR.

9. (Previously Presented) An isolated antibody or a functional fragment thereof according to claim 6, wherein the comparative binding specificity is determined by antibody-antibody competition assays in the presence of C5aR or a polypeptide comprising an extracellular loop of C5aR.

10. **(Currently Amended)** An isolated antibody comprising light and heavy chain sequences comprising the amino acid sequences as set forth in SEQ ID NO:19 and SEQ ID NO:21 respectively, **or a functional fragment of the antibody,** wherein the antibody **or functional fragment thereof** binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

11-14. (Canceled)

15. **(Currently Amended)** An isolated antibody comprising light and heavy chain sequences comprising the amino acid sequences as set forth in SEQ ID NO:15 and SEQ ID NO:17 respectively, **or a functional fragment of the antibody,** wherein the antibody **or**

functional fragment thereof binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

16-19. (Canceled)

20. (Currently Amended)) An isolated antibody comprising light and heavy chain sequences comprising the amino acid sequences as set forth in SEQ ID NO:23 and SEQ ID NO:25 respectively, **or a functional fragment of the antibody,** wherein the antibody **or functional fragment thereof** binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

21-24. (Canceled)

25. (Previously Presented) An isolated antibody or a functional fragment thereof according to claim 2, wherein the antibody also inhibits activation of neutrophils by a chemoattractant ligand other than C5a.

26. (Previously Presented) An isolated antibody according to claim 2, wherein the antibody is a monoclonal or recombinant antibody.

27. (Previously Presented) An antibody that is reactive with the second extracellular loop of C5aR set forth as the amino acid sequence from residue 175 to 206 of SEQ ID NO: 1, wherein the antibody reduces or inhibits the binding of C5a to C5aR, and wherein the antibody is a chimeric antibody or a humanized antibody.

28. (Previously Presented) An isolated antibody according to claim 2, wherein the antibody is a class IgG2a or class IgG3 antibody.

29. (Previously Presented) A monoclonal antibody selected from the group consisting of a monoclonal antibody as deposited with ECACC under accession number 00110609, a

monoclonal antibody as deposited with ECACC under accession number 02090226, and a monoclonal antibody as deposited with ECACC under accession number 04090801.

30. (Original) A hybridoma as deposited with ECACC under accession number 00110609.

31. (Original) A hybridoma as deposited with ECACC under accession number 02090226.

32. (Previously Presented) A hybridoma as deposited with ECACC under accession number 04090801.

33. (Previously Presented) A conjugate comprising:
an antibody or a functional fragment thereof that is reactive with the second extracellular loop of C5aR set forth as the amino acid sequence from residue 175 to 206 of SEQ ID NO: 1, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR; and
a therapeutic agent.

34. (Original) A conjugate according to claim 33, wherein the therapeutic agent is a toxin.

35. (Original) A conjugate according to claim 33, wherein the toxin is a *Pseudomonas* exotoxin or a derivative thereof.

36. **(Currently Amended)** A conjugate comprising:
an antibody or a functional fragment thereof that is reactive with the second extracellular loop of C5aR set forth as the amino acid sequence from residue 175 to 206 of SEQ ID NO: 1, wherein the antibody or functional fragment thereof reduces or inhibits the binding of C5a to C5aR; and

a detectable label.

37. (Original) A conjugate according to claim 36, wherein the label is selected from the group consisting of a radiolabel, a fluorescent label, an enzymatic label and contrast media.

38. **(Currently Amended)** An isolated nucleic acid molecule, the nucleic acid molecule comprising a sequence encoding the antibody or functional fragment thereof of ~~claim 2~~ **claim 10**.

39. (Previously Presented) A composition comprising an isolated antibody or a functional fragment thereof according to claim 2 and a pharmaceutically acceptable carrier.

40. (Withdrawn) A method for inhibiting the interaction of a cell bearing C5aR with a ligand thereof, the method comprising exposing the cell to an isolated antibody or a functional fragment thereof of claim 2.

41. (Withdrawn) A method for inhibiting C5aR activity in a cell, the method comprising exposing the cell to an isolated antibody or a functional fragment thereof of claim 2.

42. **(Withdrawn – Currently Amended)** A method **for reducing or inhibiting C5a binding to C5aR in** ~~of treating~~ a disorder involving neutrophil migration in a subject, the method comprising administering to the subject an isolated antibody or a functional fragment thereof of claim 2.

43. **(Withdrawn – Currently Amended)** A method for **detecting a C5aR** ~~diagnosing a disorder involving neutrophil migration~~ in a subject, the method comprising contacting a sample obtained from the subject with a conjugate of claim 36, and detecting immunospecific binding between the conjugate and the sample.

44. (Withdrawn) A method according to claim 43, wherein the method is performed *in vitro* using histological specimens or subfractions of tissue or fluid obtained from the subject.

45. (Withdrawn) A method according to claim 43, wherein the method is performed *in vivo*.

46. **(Withdrawn – currently amended)** A method for detecting C5aR ~~diagnosing a disorder involving neutrophil migration~~ in a subject, the method comprising administering to the subject an isolated antibody or a functional fragment thereof of claim 2 labeled with an imaging agent under conditions so as to form a complex between the antibody and cells presenting C5aR in the subject, and imaging the complex.

47. (Withdrawn) A method according to any one of claim 42, wherein the disorder is an immunopathological disorder.

48. (Withdrawn) A method for delivering a therapeutic agent to a site of inflammation in a subject, the method comprising administering to the subject a conjugate of claim 33.

49. (Withdrawn) A method for introducing genetic material into cells presenting C5aR, the method comprising contacting the cells with an isolated antibody or a functional fragment thereof of claim 2, wherein the antibody or functional fragment thereof is attached to or associated with genetic material.

50. **(Withdrawn – Currently Amended)** A method according to claim 49, wherein the cells presenting C5aR are selected from the group consisting of ~~granulocytes~~, leukocytes, ~~such as monocytes, macrophages, basophils and eosinophils, mast cells and lymphocytes including T cells, dendritic cells, and non-myeloid cells such as endothelial cells and smooth muscle cells.~~

51. **(Withdrawn – Currently Amended)** A method of reducing or inhibiting C5a binding to C5aR in ~~treating~~ a disorder involving neutrophil migration in a subject, the method comprising introducing into cells of the subject a polynucleotide encoding an isolated antibody or a functional fragment thereof according to claim 2 such that the antibody or functional fragment thereof is expressed *in vivo*.

52. (Previously Presented) An isolated antibody comprising:
a heavy chain comprising heavy chain CDR loop sequences CDR1, CDR2 and CDR3 as shown in SEQ ID NO:26, SEQ ID NO:27 and SEQ ID NO:28, respectively; and
a light chain comprising light chain CDR loop sequences as defined by amino acid residues 24 to 39, 55 to 61 and 94 to 102 of the variable light chain sequence as shown in SEQ ID NO:19,
wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

53. (Previously Presented) An isolated antibody comprising:
a heavy chain comprising heavy chain CDR loop sequences CDR1, CDR2 and CDR3 as shown in SEQ ID NO:29, SEQ ID NO:30 and SEQ ID NO:31, respectively; and
a light chain comprising light chain CDR loop sequences as defined by amino acid residues 24 to 39, 55 to 61 and 94 to 102 of the variable light chain sequence as shown in SEQ ID NO:15,
wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

54. (Previously Presented) An isolated antibody comprising:
a heavy chain comprising heavy chain CDR loop sequences CDR1, CDR2 and CDR3 as shown in SEQ ID NO:32, SEQ ID NO:33 and SEQ ID NO:34, respectively; and
a light chain comprising light chain CDR loop sequences as defined by amino acid residues 24 to 39, 55 to 61 and 94 to 102 of the variable light chain sequence as shown in SEQ ID NO:23,
wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

55. (Previously Presented) An isolated antibody comprising a light chain comprising the amino acid sequence as set forth in SEQ ID NO:19, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

56. (Previously Presented) An isolated antibody comprising a heavy chain comprising the amino acid sequence as set forth in SEQ ID NO:21, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

57. (Previously Presented) An isolated antibody comprising a light chain comprising the amino acid sequence as set forth in SEQ ID NO:15, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

58. (Previously Presented) An isolated antibody comprising a heavy chain comprising the amino acid sequence as set forth in SEQ ID NO:17, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

59. (Previously Presented) An isolated antibody comprising a light chain comprising the amino acid sequence as set forth in SEQ ID NO:23, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

60. (Previously Presented) An isolated antibody comprising a heavy chain comprising the amino acid sequence as set forth in SEQ ID NO:25, wherein the antibody binds to C5aR and reduces or inhibits the binding of C5a to C5aR.

61. **(Canceled)**

62. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 2, wherein the isolated antibody or functional fragment thereof is a whole antibody.

63. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 3, wherein the isolated antibody or functional fragment thereof is a whole antibody.

64. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 4, wherein the isolated antibody or functional fragment thereof is a whole antibody.

65. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 5, wherein the isolated antibody or functional fragment thereof is a whole antibody.

66. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 6, wherein the isolated antibody or functional fragment thereof is a whole antibody.

67. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 7, wherein the isolated antibody or functional fragment thereof is a whole antibody.

68. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 8, wherein the isolated antibody or functional fragment thereof is a whole antibody.

69. (Previously Presented) The isolated antibody or functional fragment thereof according to claim 9, wherein the isolated antibody or functional fragment thereof is a whole antibody.

70. **(Currently Amended)** The conjugate according to claim 33, wherein the ~~isolated~~ antibody or functional fragment thereof is a whole antibody.

71. **(Currently Amended)** The conjugate according to claim 36, wherein the ~~isolated~~ antibody or functional fragment thereof is a whole antibody.

72. (Previously Presented) The method according to claim 46, wherein the isolated antibody or functional fragment thereof is a whole antibody.

73. (Previously Presented) The method according to claim 49, wherein the isolated antibody or functional fragment thereof is a whole antibody.

74. (Previously Presented) The method according to claim 51, wherein the isolated antibody or functional fragment thereof is a whole antibody.

75. **(Currently Amended)** An isolated antibody or a functional fragment thereof according to claim 7, wherein the ~~comparative~~ **competitive** binding specificity is determined by antibody-antibody competition assays in the presence of C5aR or a polypeptide comprising an extracellular loop of C5aR.

76. **(Currently Amended)** An isolated antibody or a functional fragment thereof according to claim 8, wherein the ~~comparative~~ **competitive** binding specificity is determined by antibody-antibody competition assays in the presence of C5aR or a polypeptide comprising an extracellular loop of C5aR.

77. **(New)** A method according to claim 49, wherein the cells presenting C5aR are selected from the group consisting of granulocytes, monocytes, macrophages, basophils, eosinophils, mast cells and lymphocytes.

78. **(New)** A method according to claim 49, wherein the cells presenting C5aR are selected from the group consisting of T cells and dendritic cells.

79. **(New)** A method according to claim 49, wherein the cells presenting C5aR are selected from the group consisting of endothelial cells and smooth muscle cells.

80. **(New)** An isolated nucleic acid molecule, the nucleic acid molecule comprising a sequence encoding the antibody or functional fragment thereof of claim 15.

81. **(New)** An isolated nucleic acid molecule, the nucleic acid molecule comprising a sequence encoding the antibody or functional fragment thereof of claim 20.